

In the claims:

1-14. (cancelled)

15. (currently amended) ~~The system according to claim 1, An optical system for use in measurements in a sample, the system comprising:~~

(a) a light source operable to produce an incident light beam propagating in a certain direction towards the sample through an illumination channel;

(b) a detector unit for collecting light coming from the sample through a detection channel, and generating data indicative of the collected light; and

(c) a light directing assembly operable to direct the incident beam onto a certain location on the sample's plane with a plurality of incident angles, and to direct light returned from the illuminated location to the detector unit, the light directing assembly comprising a plurality of beam deflector elements, at least one of the deflector elements being movable, a position of said at least one movable deflector element defining a selected one of the incident angles, wherein the light directing assembly defines an additional illumination/detection channel for directing the incident beam onto the sample along an axis perpendicular to the sample's plane and directing a reflection of the perpendicular incident beam to the detector.

16. (currently amended) ~~The system according to claim 6, An optical system for use in measurements in a sample, the system comprising:~~

(a) a light source operable to produce an incident light beam propagating in a certain direction towards the sample through an illumination channel;

(b) a detector unit for collecting light coming from the sample through a detection channel, and generating data indicative of the collected light; and

(c) a light directing assembly operable to direct the incident beam onto a certain location on the sample's plane with a plurality of incident angles, and to direct light returned from the illuminated location to the detector unit, the light directing assembly comprising a plurality of beam deflector elements, at least one of the deflector elements being movable, a position of said at least one movable deflector element defining a selected one of the incident angles,

wherein the plurality of said deflector elements comprises two arrays of the deflector elements, one array being located in the illumination channel and the other array being located in the detection channel,

wherein each of the two arrays is formed by a reflecting surface of a parabolic-sector mirror, and

wherein the light directing assembly defines an additional illumination/detection channel for directing the incident beam onto the sample along an axis perpendicular to the sample's plane and directing a reflection of the perpendicular incident beam to the detector, the additional illumination/detection channel being formed by a beam splitter spatially separating the perpendicular incident and reflected beams, and first and second planar mirrors, each being additionally shiftable between its operative and inoperative positions being, respectively, in and out of the optical path of the respective beam, such that when the first and second planar mirrors are in their operative positions, the incident and returned beams propagate through the illumination and the detection channels, respectively, and when the first and second planar mirrors are in their inoperative states, the incident and returned beams propagate through the additional illumination/detection channel.

17. (currently amended) ~~The system according to claim 2.~~ An optical system for use in measurements in a sample, the system comprising:

(a) a light source operable to produce an incident light beam propagating in a certain direction towards the sample through an illumination channel;

(b) a detector unit for collecting light coming from the sample through a detection channel, and generating data indicative of the collected light; and

(c) a light directing assembly operable to direct the incident beam onto a certain location on the sample's plane with a plurality of incident angles, and to direct light returned from the illuminated location to the detector unit, the light directing assembly comprising a plurality of beam deflector elements, at least one of the deflector elements being movable, a position of said at least one movable deflector element defining a selected one of the incident angles,

wherein the plurality of said deflector elements comprises two arrays of the deflector elements, one array being located in the illumination channel and the other array being located in the detection channel, and

wherein the light directing assembly defines an additional illumination/detection channel for directing the incident beam onto the sample along an axis perpendicular to the sample's plane and directing a reflection of the perpendicular incident beam to the detector, the additional illumination/detection channel being formed by a beam splitter spatially separating the perpendicular incident and reflected beams, and first and second planar mirrors, the first mirror being located in the optical part of the incident beam and being shiftable between its operative and inoperative positions being, respectively, in and out of

the optical path of the incident beam, and the second planar mirror being accommodated in the optical part of the returned beam and being shiftable between its operative and inoperative positions being, respectively, in and out of the optical path of the returned beam, such that when the first and second planar mirrors are in their operative positions, the incident and returned beams propagate through the illumination and the detection channels, respectively, and when the first and second planar mirrors are in their inoperative states, the incident and returned beams propagate through the additional illumination/detection channel.

18.-21. (cancelled)